

### **REMARKS**

Claims 1, 3-7, 9 and 11 are pending in this application, of which claims 1, 5-7, 9 and 11 have been amended. Claims 2 and 10 have been canceled. No new claims have been added.

The Examiner has maintained from the previous Office Action the 35 U.S.C. §103(a) rejection of claims 1-5 and 9-11 as unpatentable over Kamei et al, Nilsson et al and Deacon.

Applicant respectfully traverses this rejection.

FIG. 40 and paragraph 0291 of Kamei et al, disclose "temperature compensation materials 419a-419n that fill a plurality of grooves 418a-418n." Thus, the optical characteristics can be maintained even through the room temperature changes.

In contrast, claim 1 has been amended to recite "a plurality of lens-shaped groove structures ...are filled with a material having a refracture index temperature coefficient different from that of said core" and "a heater electrode... for controlling temperature of said material." Page 16, line 23 to page 17, line 3 discloses that "a wavefront of the light propagating through the slab waveguide can be controlled by control of the temperature of the filling material. That is, a divergence angle of the propagating light can be controlled." Claim 1, as amended, provides this feature, which is not disclosed in any of the cited references.

Similarly, claim 11 has been amended to recite "a plurality of wedge-shaped groove structures... being filled with a material having a refractive index temperature coefficient different from that of said core." Page 23, lines 12-14 disclose that a "guide direction of light is varied by temperature control of the filling material." Claim 11, as amended, provides this feature, which is not disclosed in any of the cited references.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

The Examiner has also maintained from the previous Office Action the 35 U.S.C. §103(a) rejection of claims 6 and 7 as unpatentable over Kamei et al., Deacon, Nilsson et al and Kurokawa et al.

Applicant respectfully traverses this rejection.

As noted in Applicant's last response, Kurokawa et al has been cited for teaching the dispersion compensation circuit comprising the optical functional waveguide according to claim 1 but, like the other cited references, fails to teach, mention or suggest the lens-shaped groove structure recited in claim 1, as amended, from which claims 6 and 7 depend.


Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 1, 3-7, 9 and 11, as amended, are in condition for allowance, which action, at an early date, is respectfully requested.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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